

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

```

graph TD
    20[CONTINUOUS LEVEL PHOTOGRAPH] --> 10[SCANNER]
    30[DIGITAL CAMERA] --> 10
    10 --> 15[CONTINUOUS LEVEL IMAGE]
    15 --> 60a[DISK]
    15 --> 70[IMAGE BINARIZATION]
    50[IMAGE CREATION WORKSTATION] --> 40[FAX]
    50 --> 15a[DISCRETE LEVEL IMAGE]
    15a --> 60b[DISK]
    40 --> 70
    70 --> 75[BINARIZED IMAGE]
    75 --> 80[MR CODING]
    80 --> 90[ARITHMETIC CODING]
    80 --> 100[MR CODE ELEMENT FREQUENCY ACCUMULATION]
    90 --> 95[COMPRESSED IMAGE]
    95 --> 105[COMPACT STORAGE AND/OR FAX TRANSMISSION]
    105 --> 110[ARITHMETIC DECODING]
    110 --> 130[MR DECODING]
    110 --> 120[MR CODE ELEMENT FREQUENCY ACCUMULATION]
    120 --> 130
    130 --> 140[DECOMPRESSIONED BINARIZED IMAGE]
  
```

The flowchart illustrates the process of image binarization and compression. It starts with two input paths: a continuous level photograph (20) scanned by a scanner (10), or a digital camera (30) providing a continuous level image (15). Both paths lead to a continuous level image (15), which can be stored on a disk (60) or sent to an image creation workstation (50). The workstation (50) can also take a discrete level image (15a) from a disk (60) and output a fax (40). Both the continuous level image (15) and the fax (40) are processed by image binarization (70) to produce a binarized image (75). This binarized image (75) is then processed by MR coding (80). The output of MR coding (80) is split: one path goes to arithmetic coding (90) to produce a compressed image (95), which is then stored or transmitted via compact storage or fax transmission (105). The other path from MR coding (80) goes to MR code element frequency accumulation (100) to produce a code symbol frequency (100). The compressed image (95) is then processed by arithmetic decoding (110). The output of arithmetic decoding (110) is split: one path goes to MR decoding (130) to produce a decompressioned binarized image (140), and the other path goes to MR code element frequency accumulation (120) to produce a code symbol frequency (120). The code symbol frequency (120) is then used by the MR decoding (130) to produce the final decompressioned binarized image (140).